**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of	)
	)
Jeffrey A. DEAN et al.	) **ATTN: APPEAL BRIEF - PATENTS**
	)
Application No.: 09/734,883	) Group Art Unit: 2176
	)
Filed: December 13, 2000	) Examiner: J. Debrow
	)
For: SCORING LINKS IN A DOCUMENT	)

U.S. Patent and Trademark Office
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APPEAL BRIEF

This Appeal Brief is submitted in response to the non-final Office Action, dated January

24, 2008, and in support of the Notice of Appeal, filed April 23, 2008.

I.   REAL PARTY IN INTEREST

The real party in interest in this appeal is Google Inc.

II.   RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

Appellants are unaware of any related appeals, interferences, or judicial proceedings.

III.   STATUS OF CLAIMS

Claims 39 and 41-66 are pending in this application.

Claims 39, 41, 44-46, 52, 53, 56-61, and 64-66 have been finally rejected under 35

U.S.C. § 103(a) as unpatentable over <u>Armstrong et al.</u> ("WebWatcher: A Learning Apprentice

for the World Wide Web, 1995") in view of <u>Pant et al.</u> (U.S. Patent No. 6,012,053).

Claims 47-51 have been finally rejected under 35 U.S.C. § 103(a) as unpatentable over

<u>Arthurs</u> (U.S. Patent No. 6,591,261) in view of <u>Pant et al.</u>.

Claims 42, 43, 54, 55, 62, and 63 have been finally rejected under 35 U.S.C. § 103(a) as

unpatentable over <u>Armstrong et al.</u> in view of <u>Pant et al.</u> and <u>Page</u> (U.S. Patent No. 6,285,999).

Claims 1-38 and 40 were previously canceled without prejudice or disclaimer.

Claims 39 and 41-66 are the subject of the present appeal. These claims are reproduced

in the Claim Appendix of this Appeal Brief.

IV.   STATUS OF AMENDMENTS

Prosecution was reopened and a non-final Office Action was issued in response to the

Appeal Brief that was filed on November 5, 2007. No Amendments were filed subsequent to the

non-final Office Action.

V.   SUMMARY OF CLAIMED SUBJECT MATTER

In the paragraphs that follow, a concise explanation of the independent claims and the

claims reciting means-plus-function or step-plus-function language that are involved in this

appeal will be provided by referring, in parenthesis, to examples of where support can be found

in the specification and drawings.

Claim 39 recites a computer-implemented method that comprises identifying a document that is stored on a server in a network and that includes links to linked documents (Fig. 6, 610; page 12, line 16 - page 13, line 4); determining scores for a plurality of the links in the identified document (Fig. 6, 630; page 13, lines 10-16); modifying the identified document based on the determined scores (page 15, lines 15-17), where the modifying includes reordering at least two of the links based on the determined scores (page 15, lines 18-19), or sorting at least two of the links based on the determined scores (page 15, line 19 - page 16, line 2); and providing the modified document to a user (Fig. 6, 670; page 16, line 18 - page 17, line 3).

Claims 41 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes for each of the linked documents, determining scores for one or more linking documents that contain links to the linked document (page 13, lines 18-19), determining a score for each of the linked documents based on the scores of the one or more linking documents (page 13, lines 18-19), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 42 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes determining a clickthrough rate for each of the linked documents (page 14, lines 3-7), determining a score for each of the linked documents based on the determined clickthrough rates (page 14, lines 3-7), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 43 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes determining a measure of popularity associated with each of the linked documents (page 14, lines 8-12), determining a score for each of the linked documents based on the determined measure of popularity (page 14, lines 8-12), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 46 recites that modifying the identified document includes comparing the determined scores to a threshold (page 16, lines 6-8), and deleting one of the links from the identified document when the determined score for the one of the links falls below the threshold (page 16, lines 6-8).

Claim 47 recites a computer-implemented method that comprises receiving a search query (page 12, line 16 - page 13, line 1); providing a list of search results in response to the search query (page 12, line 16 - page 13, line 1); receiving selection of one of the search results in the list of search results (page 12, line 16 - page 13, line 1; page 14, lines 14-15); identifying links in a document corresponding to the selected search result (page 12, line 16 - page 13, line 4); determining a score for one of the links based on a degree of match between the search query and a content of a linked document pointed to by the one of the links (page 13, lines 10-16; page 14, lines 13-16); modifying the document based on the determined score for the one of the links (page 15, line 15 - page 16, line 17); and providing the modified document (page 16, line 18 - page 17, line 3).

Claim 48 recites that determining the score for the one of the links includes determining scores for each of a plurality of the links in the document based on a degree of match between

the search query and a content of a linked document pointed to by the link (page 14, line 13 - page 15, line 2); and that modifying the document includes reordering the links based on the determined scores (page 15, line 18 - page 16, line 2).

Claim 49 recites that reordering the links includes sorting the links based on the determined scores (page 15, line 18 - page 16, line 2).

Claim 50 recites that modifying the document includes changing at least one visual characteristic of the one of the links within the document based on the determined score (page 16, lines 3-6).

Claim 51 recites comparing the determined score to a threshold (page 16, lines 6-8); and deleting the one of the links when the determined score for the one of the links falls below a threshold (page 16, lines 6-8).

Claim 52 recites a computer-implemented method that comprises identifying a document that is stored on a server in a network and that includes links to linked documents (Fig. 6, 610; page 12, line 16 - page 13, line 4); determining scores for a plurality of the links in the identified document (Fig. 6, 630; page 13, lines 10-16); comparing the determined scores to a threshold (page 16, lines 6-8); deleting one of the plurality of links from the identified document when the score for the one of the links falls below the threshold (page 16, lines 6-8); and providing, to a user, the identified document without the deleted link (Fig. 6, 670; page 16, line 18 - page 17, line 3).

Claim 53 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes for each of the linked documents, determining scores for one or more linking documents that contain links to the linked

document (page 13, lines 18-19), determining a score for each of the linked documents based on the scores of the one or more linking documents (page 13, lines 18-19), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 54 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes determining a clickthrough rate for each of the linked documents (page 14, lines 3-7), determining a score for each of the linked documents based on the determined clickthrough rates (page 14, lines 3-7), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 55 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and that determining the scores includes determining a measure of popularity associated with each of the linked documents (page 14, lines 8-12), determining a score for each of the linked documents based on the determined measure of popularity (page 14, lines 8-12), and associating the determined scores for the linked documents with the corresponding links in the identified document (page 13, lines 10-12).

Claim 58 recites determining additional information regarding a linked document pointed to by the one of the plurality of links when the score for the one of the links does not fall below the threshold (page 16, lines 9-15); and providing the identified document with the additional information to the user (page 16, line 18 - page 17, line 3).

Claim 59 recites a system that comprises means for identifying a document based on an address associated with the document, the document including links that point to linked

documents (Fig. 1, 110; Fig. 2; page 12, line 16 - page 13, line 4); means for determining scores

for a plurality of the links in the identified document (Fig. 1, 110; Fig. 2; page 13, lines 10-16);

means for comparing the determined scores to a threshold (Fig. 1, 110; Fig. 2; page 16, lines 12-

13); means for determining that a score for one of the plurality of links is greater than the

threshold (Fig. 1, 110; Fig. 2; page 16, lines 12-13); means for determining additional

information regarding the linked document pointed to by the one of the plurality of links (Fig. 1,

110; Fig. 2; page 16, lines 9-15); and means for providing the identified document with the

additional information to a user (Fig. 1, 110; Fig. 2; page 16, line 18 - page 17, line 3).

Claim 60 recites that the system further comprises means for determining that a score for

another one of the plurality of links is not greater than the threshold (Fig. 1, 110; Fig. 2; page 16,

lines 6-8); means for deleting the other one of the plurality of links from the identified document

(Fig. 1, 110; Fig. 2; page 16, lines 6-8); and means for providing, to a user, the identified

document without the deleted link (Fig. 1, 110; Fig. 2; page 16, line 18 - page 17, line 3).

Claim 61 recites that the links in the identified document point to a plurality of linked

documents (page 13, lines 11-12); and wherein the means for determining the scores includes

means for determining, for each of the linked documents, scores for one or more linking

documents that contain links to the linked document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 13,

lines 18-19; page 15, lines 5-14), means for determining a score for each of the linked documents

based on the scores of the one or more linking documents (Fig. 1, 110, 120; Fig. 2; Fig. 5; page

13, lines 18-19; page 15, lines 5-14), and means for associating the determined scores for the

linked documents with the corresponding links in the identified document (Fig. 1, 110, 120; Fig.

2; Fig. 5; page 13, lines 10-12; page 15, lines 5-14).

Claim 62 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and wherein the means for determining the scores includes means for determining a clickthrough rate for each of the linked documents (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, lines 3-7; page 15, lines 5-14), means for determining a score for each of the linked documents based on the determined clickthrough rates (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, lines 3-7; page 15, lines 5-14), and means for associating the determined scores for the linked documents with the corresponding links in the identified document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 13, lines 10-12; page 15, lines 5-14).

Claim 63 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and wherein the means for determining the scores includes means for determining a measure of popularity associated with each of the linked documents (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, lines 8-12; page 15, lines 5-14), means for determining a score for each of the linked documents based on the determined measure of popularity (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, lines 8-12; page 15, lines 5-14), and means for associating the determined scores for the linked documents with the corresponding links in the identified document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 13, lines 10-12; page 15, lines 5-14).

Claim 64 recites that the links in the identified document point to a plurality of linked documents (page 13, lines 11-12); and wherein the means for determining the scores includes means for receiving input from the user (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, line 13 - page 15, line 2; page 15, lines 5-14), means for determining a score for each of the linked documents based on the received input (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, line 13 - page 15, line 2; page 15, lines 5-14), and means for associating the determined scores for the linked documents

with the corresponding links in the identified document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 13, lines 10-12; page 15, lines 5-14).

Claim 65 recites that the means for determining the score for each of the linked documents includes means for comparing, for each of the linked documents, one or more words of the received input with a content of the linked document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, line 13 - page 15, line 2; page 15, lines 5-14), and means for determining a score for the linked document based on a degree of match between the one or more words and the content of the linked document (Fig. 1, 110, 120; Fig. 2; Fig. 5; page 14, line 13 - page 15, line 2; page 15, lines 5-14).

Claim 66 recites that the additional information includes an excerpt from the linked document (page 16, lines 13-15), a size of the linked document (page 16, lines 13-15), or a date of last modification of the linked document (page 16, lines 13-15).

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A.   Claims 39, 41, 44-46, 52, 53, 56-61, and 64-66 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Armstrong et al. in view of Pant et al.

B.   Claims 47-51 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Arthurs in view of Pant et al.

C.   Claims 42, 43, 54, 55, 62, and 63 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Armstrong et al. in view of Pant et al. and Page.

VII.   ARGUMENT

A.   **The Rejection Under 35 U.S.C. § 103(a) Based on <u>Armstrong et al.</u>
("WebWatcher: A Learning Apprentice for the World Wide Web," 1995) in
View of <u>Pant et al.</u> (U.S. Patent No. 6,012,053) Should be Reversed.**

The initial burden of establishing a prima facie basis to deny patentability to a claimed

invention is always upon the Examiner. <u>In re Oetiker</u>, 977 F.2d 1443, 24 USPQ2d 1443 (Fed.

Cir. 1992). In rejecting a claim under 35 U.S.C. § 103, the Examiner must provide a factual

basis to support the conclusion of obviousness. <u>In re Warner</u>, 379 F.2d 1011, 154 USPQ 173

(CCPA 1967). Based upon the objective evidence of record, the Examiner is required to make

the factual inquiries mandated by <u>Graham v. John Deere Co.</u>, 86 S.Ct. 684, 383 U.S. 1, 148

USPQ 459 (1966). <u>KSR International Co. v. Teleflex Inc.</u>, 550 U.S. _____ (April 30, 2007).

The Examiner is also required to explain how and why one having ordinary skill in the art would

have been led to modify an applied reference and/or combine applied references to arrive at the

claimed invention. <u>Uniroyal, Inc. v. Rudkin-Wiley Corp.</u>, 837 F.2d 1044, 5 USPQ2d 1434 (Fed.

Cir. 1988).

1.   Claims 39, 44, and 45.

Independent claim 39 is directed to a computer-implemented method that comprises

identifying a document that is stored on a server in a network and that includes links to linked

documents; determining scores for a plurality of the links in the identified document; modifying

the identified document based on the determined scores, where the modifying includes

reordering at least two of the links based on the determined scores or sorting at least two of the

links based on the determined scores; and providing the modified document to a user.

Neither <u>Armstrong et al.</u> nor <u>Pant et al.</u>, whether taken alone or in any reasonable

combination, discloses or suggests the combination of features recited in claim 39. For example,

Armstrong et al. and Pant et al. do not disclose or suggest modifying an identified document, that

is stored on a server in a network, based on scores determined for a plurality of the links in the

identified document, where the modifying includes reordering at least two of the links in the

identified document based on the determined scores, or sorting at least two of the links in the

identified document based on the determined scores, as recited in claim 39.

The Examiner admitted that Armstrong et al. does not disclose or suggest these features,

but alleged that Pant et al. discloses these features and cited column 2, lines 25-43, and column

3, lines 56-63, of Pant et al. for support. Office Action, page 4. Appellants submit that the

disclosure of Pant et al. provides no support for the Examiner's allegation.

At column 2, lines 25-43, Pant et al. discloses:

> Accordingly, one aspect of the present invention is a computer system for providing user-controllable relevance ranking of search results from a query on a collection of items of information. The computer system includes a relevance determination module having a first input for receiving a set of search results from a query indicating items in the collection matching the query, a second input for receiving an indication of relevance factors specified by a user, and a third input for receiving information about the items in the set of search results to which relevance factors may be applied. This module has an output for providing an indication of a score indicative of relevance for each of the items in the set of search results. A sorting module has an input which receives the score associated with each item and an indication of the set of search results, and an output providing to the user an indication of the items in the set of search results in an order ranked according to the relevance score of each item.

In this section, Pant et al. discloses a relevance determination module that provides a score

indicative of the relevance of each item in a set of search results and a sorting module that ranks

the items based on their relevance scores. Appellants submit that the relevance determination

module and the sorting module are not operating upon links in an identified document that is

stored on a server in a network, but instead are operating upon items in a set of search results.

These search results are <u>not</u> an identified document that is stored on a server in a network, as

recited in claim 39. <u>Pant et al.</u> specifically discloses that the search results are not formed into an

HTML document until after the search results are scored and ranked. Column 5, line 61 - col. 6,

line 15. Therefore, <u>Pant et al.</u> does not disclose or suggest modifying <u>an identified document,</u>

<u>that is stored on a server in a network,</u> based on scores determined for a plurality of the links in

the identified document, where the modifying includes reordering <u>at least two of the links in the</u>

<u>identified document</u> based on the determined scores, or sorting <u>at least two of the links in the</u>

<u>identified document</u> based on the determined scores, as recited in claim 39.

      At column 3, lines 56-63, <u>Pant et al.</u> discloses:

> Another embodiment is shown in FIG. 2. In this computer system 130, the search results
> 110 do not include a score with each item. Therefore, the relevance determination module
> 128 outputs scores 124 separately for each item in the search results. Both the search
> results 110 and the list of scores 124 are used by the sorting module 124 to produce
> ranked results for the user. The embodiment is otherwise the same as shown in FIG. 1.

In this section, <u>Pant et al.</u> discloses a relevance determination module that outputs scores

separately for each item in the search results. Appellants submit that the relevance determination

module is not operating upon links in an identified document that is stored on a server in a

network, but instead is operating upon items in a set of search results. <u>Pant et al.</u> specifically

discloses that the search results are not formed into an HTML document until after the search

results are scored and ranked. Column 5, line 61 - col. 6, line 15. Therefore, <u>Pant et al.</u> does not

disclose or suggest modifying <u>an identified document, that is stored on a server in a network,</u>

based on scores determined for a plurality of the links in the identified document, where the

modifying includes reordering <u>at least two of the links in the identified document</u> based on the

determined scores, or sorting <u>at least two of the links in the identified document</u> based on the

determined scores, as recited in claim 39.

The Examiner alleged that it would have been obvious to combine <u>Armstrong et al.</u> with

<u>Pant et al.</u> "for the benefit of providing a mechanism through which results from a search query

are ranked according to the user-specified relevance factors to allow the user to control how the

search resulted are ordered and presented." Office Action, page 5. Appellants submit that the

Examiner's reasons for combining the disclosures of <u>Armstrong et al.</u> and <u>Pant et al.</u> lack merit.

<u>Armstrong et al.</u> has nothing to do with results from a search query. Rather, <u>Armstrong et al.</u>

discloses a WebWatcher that determines which hyperlinks in a web page a user should take, and

modifies the web page to highlight these links. Page 3, left column, 2nd paragraph. Thus,

contrary to the Examiner's allegation, it would not make sense to modify the <u>Armstrong et al.</u>

system to provide a mechanism through which results from a search query are ranked according

to user-specified relevance factors to allow the user to control how the search resulted are

ordered and presented. Appellants submit that the opposite would be true -- there is no viable

reason to incorporate the alleged features of <u>Pant et al.</u> into the system of <u>Armstrong et al.</u>

For at least these reasons, it is respectfully submitted that claim 39 is patentable over

<u>Armstrong et al.</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35

U.S.C. § 103. Reversal of the rejection of claim 39 is respectfully requested.

Claims 44 and 45 depend from claim 39. Claims 44 and 45 are, therefore, patentable

over <u>Armstrong et al.</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination,

under 35 U.S.C. § 103 for at least the reasons given with regard to claim 39. Reversal of the

rejection of claims 44 and 45 is respectfully requested.

> 2.   Claim 41.

Dependent claim 41 recites that the links in the identified document point to a plurality of linked documents; and that determining the scores includes for each of the linked documents, determining scores for one or more linking documents that contain links to the linked document, determining a score for each of the linked documents based on the scores of the one or more linking documents, and associating the determined scores for the linked documents with the corresponding links in the identified document.

Initially, claim 41 depends from claim 39. Therefore, claim 41 is patentable over Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 39.

Further, Armstrong et al. and Pant et al. do not disclose or suggest the combination of features recited in claim 41. For example, Armstrong et al. and Pant et al. do not disclose or suggest determining a score for each of the linked documents based on the scores of the one or more linking documents, as recited in claim 41.

The Examiner alleged that Armstrong et al. discloses this feature and cited section 2 and Figure 4, of Armstrong et al. for support. Office Action, page 5. Appellants submit that the disclosure of Armstrong et al. provides no support for the Examiner's allegation.

In section 2, Armstrong et al. discloses a WebWatcher that determines which hyperlinks in a web page a user should take, and modifies the web page to highlight these links. Page 3, left column, 2nd paragraph. Armstrong et al. discloses that the WebWatcher determines which links that the user should take based on information regarding the current web page, information about the information that is sought, information about the link, and possibly information about the

user. Pages 3-4, section 3.1. Armstrong et al. does not disclose or remotely suggest that the WebWatcher determines a score for a linked document, pointed to by one of the links in the web page, based on the scores of one or more linking documents that contain links to the linked document. Thus, Armstrong et al. does not disclose or suggest determining a score for each of the linked documents based on the scores of the one or more linking documents, as recited in claim 41.

With regard to Figure 4, Armstrong et al. discloses that the WebWatcher highlights the most promising links in order to suggest them to the user. Page 3, left column. Armstrong et al. discloses that the WebWatcher determines the most promising links based on information regarding the current web page, information about the information that is sought, information about the link, and possibly information about the user (i.e., Page x Goal x Link, or Page x Goal x User x Link). Pages 3-4, section 3.1. Armstrong et al. does not disclose or remotely suggest that the WebWatcher determines a score for a linked document, pointed to by one of the links in the web page, based on the scores of one or more linking documents that contain links to the linked document. Thus, Armstrong et al. does not disclose or suggest determining a score for each of the linked documents based on the scores of the one or more linking documents, as recited in claim 41.

The Examiner alleged that Armstrong et al. discloses that the WebWatcher finds hyperlinks on the page/document that are strongly recommended by its search control knowledge and that this means that the WebWatcher implicitly determines scores for a plurality of links in the identified document in order to determine which documents are strongly recommended. Office Action, pages 5-6. Appellants submit that the Examiner's allegations, even if true, have

no bearing on the features recited in claim 41. In other words, even assuming, for the sake of

argument, that Armstrong et al. discloses determining scores for links in a document (a point that

Appellants do not concede), Armstrong et al. does not disclose or remotely suggest determining

a score for each linked document (pointed to by one of these links) based on scores of <u>one or</u>

<u>more linking documents that contain a link to the linked document</u>. Thus, Armstrong et al. does

not disclose or suggest determining a score for each of the linked documents based on the scores

of the one or more linking documents, as recited in claim 41.

For at least these reasons, it is respectfully submitted that claim 41 is patentable over

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, under 35

U.S.C. § 103. Reversal of the rejection of claim 41 is respectfully requested.

        3.   Claim 46.

Dependent claim 46 recites that modifying the identified document includes comparing

the determined scores to a threshold, and deleting one of the links from the identified document

when the determined score for the one of the links falls below the threshold.

Initially, claim 46 depends from claim 39. Therefore, claim 46 is patentable over

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, for at

least the reasons given with regard to claim 39.

Further, Armstrong et al. and Pant et al. do not disclose or suggest the combination of

features recited in claim 46. For example, Armstrong et al. and Pant et al. do not disclose or

suggest deleting one of the links from the identified document when the determined score for the

one of the links falls below a threshold, as recited in claim 46.

The Examiner admitted that <u>Armstrong et al.</u> does not disclose or suggest this feature, but alleged that <u>Pant et al.</u> discloses the feature and cited column 13, lines 9-31, of <u>Pant et al.</u> for support. Office Action, pages 8-9. Appellants submit that the disclosure of <u>Pant et al.</u> provides no support for the Examiner's allegation.

At column 13, lines 9-31, <u>Pant et al.</u> discloses:

> An example result is shown in FIG. 7. In this embodiment, the scores are shown for each item, but in other embodiments, such scores may be omitted. This search is the result of the query shown at 320 in FIG. 6. Each item includes a hypertext link 330 to the source of the document, a descriptor 332 of the document (usually text taken from the beginning of the document), an indication 334 of the source of the document and an indication of its score, as a function of the maximum score of the retrieved items. FIG. 8 illustrates results achieved with the same query when the relevance factor is the order of the search terms, set at a value of 100. FIG. 9 illustrates the results achieved with the same query when the selected relevance factors are words match, proximity and field, with values set at 100, 100 ad 10, respectively. As can be seen from the results, the search query and number of hits remains unchanged, but the presentation of results differs.
>
> By implementing a search engine in this manner, the user can control the ranking and presentation of documents that result from the search, based on the user's understanding of the factors that may affect the relevance of the documents to the query. In addition, the user can modify these factors without modifying the query.

In this section, <u>Pant et al.</u> discloses ordering search result items as a function of the maximum score of the items, ordering search result items when the relevance factor is the order of the search terms, or ordering search result items when the relevance factors are words match, proximity, and field. As explained above, search result items are not links in an identified document that is stored on a server in a network. Thus, <u>Pant et al.</u> does not disclose or suggest deleting one of the links from the identified document when the determined score for the one of the links falls below a threshold, as recited in claim 46.

Further, even assuming, for the sake of argument, that the search result items can reasonably be equated to links in an identified document that is stored on a server in a network (a

point that Appellants do not concede), Pant et al. does not disclose or deleting one of the search

result items, let alone deleting one of the search result items when the determined score for the

one of the search result items falls below a threshold. Thus, Pant et al. does not disclose or

suggest deleting one of the links from the identified document when the determined score for the

one of the links falls below a threshold, as recited in claim 46.

　　　　For at least these reasons, it is respectfully submitted that claim 46 is patentable over

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, under 35

U.S.C. § 103. Reversal of the rejection of claim 46 is respectfully requested.

　　　　4.　　Claims 52, 56, and 57.

　　　　Independent claim 52 is directed to a computer-implemented method that comprises

identifying a document that is stored on a server in a network and that includes links to linked

documents; determining scores for a plurality of the links in the identified document; comparing

the determined scores to a threshold; deleting one of the plurality of links from the identified

document when the score for the one of the links falls below the threshold; and providing, to a

user, the identified document without the deleted link.

　　　　Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination,

do not disclose or suggest the combination of features recited in claim 52. For example,

Armstrong et al. and Pant et al. do not disclose or suggest deleting one of a plurality of links

from an identified document, that is stored on a server in a network, when the score for the one

of the links falls below a threshold, as recited in claim 52.

　　　　The Examiner admitted that Armstrong et al. does not disclose or suggest this feature, but

alleged that Pant et al. discloses the feature and cited column 13, lines 9-31, of Pant et al. for

support. Office Action, page 10. Appellants submit that the disclosure of Pant et al. provides no

support for the Examiner's allegation for at least reasons similar to the reasons given with regard

to claim 46.

The Examiner admitted that a "change in the relevance factor [in Pant et al.] does not

change the search and number of hits, but the presentation of the results differs." Office Action,

page 10. The Examiner alleged that differing the presentation of the results includes deleting

one of the links from an identified document when the determined score for the one of the links

falls below a threshold. Office Action, pages 10-11. Appellants submit that there is absolutely

no merit in the Examiner's allegation. The Examiner has admitted that the number of hits does

not change with a change in the relevance factor, but the Examiner nevertheless alleged that the

number of hits does in fact change when differing the presentation of results. Office Action,

pages 10-11. This kind of contradictory reasoning finds no basis in fact and falls far short of

establishing a prima facie case of obviousness with regard to claim 52.

For at least these reasons, it is respectfully submitted that claim 52 is patentable over

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, under 35

U.S.C. § 103. Reversal of the rejection of claim 52 is respectfully requested.

Claims 56 and 57 depend from claim 52. Claims 56 and 57 are, therefore, patentable

over Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination,

under 35 U.S.C. § 103 for at least the reasons given with regard to claim 52. Reversal of the

rejection of claims 56 and 57 is respectfully requested.

5.   Claim 53.

Dependent claim 53 recites that the links in the identified document point to a plurality of linked documents; and that determining the scores includes for each of the linked documents, determining scores for one or more linking documents that contain links to the linked document, determining a score for each of the linked documents based on the scores of the one or more linking documents, and associating the determined scores for the linked documents with the corresponding links in the identified document.

Initially, claim 53 depends from claim 52. Therefore, claim 53 is patentable over Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 52.

Further, Armstrong et al. and Pant et al. do not disclose or suggest the combination of features recited in claim 53. For example, Armstrong et al. and Pant et al. do not disclose or suggest determining a score for each of the linked documents based on the scores of the one or more linking documents.

The Examiner alleged that Armstrong et al. discloses this feature and cited section 2 and Figure 4, of Armstrong et al. for support. Office Action, page 5. Appellants submit that the disclosure of Armstrong et al. provides no support for the Examiner's allegation for at least reasons similar to reasons given with regard to claim 41.

For at least these reasons, it is respectfully submitted that claim 53 is patentable over Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 53 is respectfully requested.

6.   Claim 58.

Dependent claim 58 recites determining additional information regarding a linked document pointed to by the one of the plurality of links when the score for the one of the links does not fall below the threshold; and providing the identified document with the additional information to the user.

Initially, claim 58 depends from claim 52. Therefore, claim 58 is patentable over Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 52.

Further, Armstrong et al. and Pant et al. do not disclose or suggest the combination of features recited in claim 58. For example, Armstrong et al. and Pant et al. do not disclose or suggest providing, to the user, a document that is stored on a server in a network with additional information regarding a linked document pointed to by one of a plurality of links in the document when the score for one of the links does not fall below a threshold, as recited in claim 58.

The Examiner alleged that Armstrong et al. discloses providing an identified document with additional information and cited section 2 and Figure 4, of Armstrong et al. for support, and alleged that Pant et al. discloses determining that the score for one of the links does not fall below a threshold and cited column 13, lines 9-31, of Pant et al. for support. Office Action, pages 11-12. Appellants submit that the Examiner is improperly dissecting a single claim feature into portions that the Examiner alleged are disclosed by separate references. Such a dissection is improper and falls short of establishing a prima facie case of obviousness with regard to claim 58.

Appellants submit that neither <u>Armstrong et al.</u> nor <u>Pant et al.</u>, whether taken alone or in any reasonable combination, discloses or suggests providing, to the user, a document that is stored on a server in a network with additional information regarding a linked document pointed to by one of a plurality of links in the document when the score for one of the links does not fall below a threshold, as recited in claim 58.

In section 2, <u>Armstrong et al.</u> discloses a WebWatcher that determines which hyperlinks in a web page a user should take, and modifies the web page to highlight these links. Page 3, left column, 2nd paragraph. <u>Armstrong et al.</u> does not disclose or remotely suggest that the WebWatcher provides additional information regarding a linked document pointed to by one of the links, let alone providing, to the user, a document that is stored on a server in a network with additional information regarding a linked document pointed to by one of a plurality of links in the document when the score for one of the links does not fall below a threshold, as recited in claim 58. Rather, <u>Armstrong et al.</u> simply discloses highlighting one or more of the links. See, e.g., Figure 4.

With regard to Figure 4, <u>Armstrong et al.</u> discloses that the WebWatcher highlights the most promising links in order to suggest them to the user. Page 3, left column. <u>Armstrong et al.</u> does not disclose or remotely suggest that the WebWatcher provides additional information regarding a linked document pointed to by one of the links, let alone providing, to the user, a document that is stored on a server in a network with additional information regarding a linked document pointed to by one of a plurality of links in the document when the score for one of the links does not fall below a threshold, as recited in claim 58. Rather, <u>Armstrong et al.</u> simply discloses highlighting one or more of the links. See, e.g., Figure 4.

In column 13, lines 9-31 (reproduced above), Pant et al. discloses a search result item that includes a link to the source of the document, a descriptor of the document, an indication of the source of the document, and an indication of its score. Nowhere does Pant et al. disclose or remotely suggest that any of this information is provided when the score of the search result item does not fall below a threshold. Thus, Pant et al. does not disclose or suggest providing, to the user, a document that is stored on a server in a network with additional information regarding a linked document pointed to by one of a plurality of links in the document when the score for one of the links does not fall below a threshold, as recited in claim 58.

The Examiner alleged that it would have been obvious to combine Armstrong et al. with Pant et al. "for the benefit of providing a mechanism through which results from a search query are ranked according to the user-specified relevance factors to allow the user to control how the search resulted are ordered and presented." Office Action, page 12. Appellants submit that the Examiner's reasons for combining the disclosures of Armstrong et al. and Pant et al. lack merit. Armstrong et al. has nothing to do with results from a search query. Rather, Armstrong et al. discloses a WebWatcher that determines which hyperlinks in a web page a user should take, and modifies the web page to highlight these links. Page 3, left column, 2nd paragraph. Thus, contrary to the Examiner's allegation, it would not make sense to modify the Armstrong et al. system to provide a mechanism through which results from a search query are ranked according to user-specified relevance factors to allow the user to control how the search resulted are ordered and presented. Appellants submit that the opposite would be true -- there is no viable reason to incorporate the alleged features of Pant et al. into the system of Armstrong et al.

For at least these reasons, it is respectfully submitted that claim 58 is patentable over

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, under 35

U.S.C. § 103. Reversal of the rejection of claim 58 is respectfully requested.

       7.   Claims 59 and 64-66.

Independent claim 59 is directed to a system that comprises means for identifying a

document based on an address associated with the document, the document including links that

point to linked documents; means for determining scores for a plurality of the links in the

identified document; means for comparing the determined scores to a threshold; means for

determining that a score for one of the plurality of links is greater than the threshold; means for

determining additional information regarding the linked document pointed to by the one of the

plurality of links; and means for providing the identified document with the additional

information to a user.

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination,

do not disclose or suggest the combination of features recited in claim 59. For example,

Armstrong et al. and Pant et al. do not disclose or suggest means for providing, to a user, an

identified document, which is identified based on an address associated with the document, with

additional information regarding the linked document pointed to by one of a plurality of links in

the identified document, as recited in claim 59.

The Examiner alleged that Armstrong et al. discloses providing an identified document

with additional information and cited section 2 and Figure 4, of Armstrong et al. for support.

Office Action, page 13. Appellants submit that the Examiner is not addressing the feature

recited in claim 59. Claim 59 does not simply recite providing an identified document with

additional information, but rather recites means for providing, to a user, an identified document,

which is identified based on an address associated with the document, with additional information <u>regarding the linked document pointed to by one of a plurality of links in the identified document</u>.

      In section 2, <u>Armstrong et al.</u> discloses a WebWatcher that determines which hyperlinks in a web page a user should take and modifies the web page to highlight these links. Page 3, left column, 2nd paragraph. <u>Armstrong et al.</u> does not disclose or remotely suggest that the WebWatcher provides additional information regarding a linked document pointed to by one of the links, let alone means for providing, to a user, an identified document, which is identified based on an address associated with the document, with additional information <u>regarding the linked document pointed to by one of a plurality of links in the identified document</u>, as recited in claim 59. Rather, <u>Armstrong et al.</u> simply discloses highlighting one or more of the links. See, e.g., Figure 4.

      With regard to Figure 4, <u>Armstrong et al.</u> discloses that the WebWatcher highlights the most promising links in order to suggest them to the user. Page 3, left column. <u>Armstrong et al.</u> does not disclose or remotely suggest that the WebWatcher provides additional information regarding a linked document pointed to by one of the links, let alone means for providing, to a user, an identified document, which is identified based on an address associated with the document, with additional information <u>regarding the linked document pointed to by one of a plurality of links in the identified document</u>, as recited in claim 59. Rather, <u>Armstrong et al.</u> simply discloses highlighting one or more of the links. See, e.g., Figure 4.

      The Examiner alleged that it would have been obvious to combine <u>Armstrong et al.</u> with <u>Pant et al.</u> "for the benefit of providing a mechanism through which results from a search query

are ranked according to the user-specified relevance factors to allow the user to control how the search resulted are ordered and presented." Office Action, page 14. Appellants submit that the Examiner's reasons for combining the disclosures of <u>Armstrong et al.</u> and <u>Pant et al.</u> lack merit. <u>Armstrong et al.</u> has nothing to do with results from a search query. Rather, <u>Armstrong et al.</u> discloses a WebWatcher that determines which hyperlinks in a web page a user should take and modifies the web page to highlight these links. Page 3, left column, 2nd paragraph. Thus, contrary to the Examiner's allegation, it would not make sense to modify the <u>Armstrong et al.</u> system to provide a mechanism through which results from a search query are ranked according to user-specified relevance factors to allow the user to control how the search resulted are ordered and presented. Appellants submit that the opposite would be true -- there is no viable reason to incorporate the alleged features of <u>Pant et al.</u> into the system of <u>Armstrong et al.</u>

For at least these reasons, it is respectfully submitted that claim 59 is patentable over <u>Armstrong et al.</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 59 is respectfully requested.

Claims 64-66 depend from claim 59. Claims 64-66 are, therefore, patentable over <u>Armstrong et al.</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103 for at least the reasons given with regard to claim 59. Reversal of the rejection of claims 64-66 is respectfully requested.

        8.   Claim 60.

Dependent claim 60 recites means for determining that a score for another one of the plurality of links is not greater than the threshold; means for deleting the other one of the plurality of links from the identified document; and means for providing, to a user, the identified

document without the deleted link.

Initially, claim 60 depends from claim 59. Therefore, claim 60 is patentable over

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, for at

least the reasons given with regard to claim 59.

Further, Armstrong et al. and Pant et al., whether taken alone or in any reasonable

combination, do not disclose or suggest the combination of features recited in claim 60. For

example, Armstrong et al. and Pant et al. do not disclose or suggest means for deleting the other

one of the plurality of links, which has a score that is not greater than a threshold, from the

identified document, as recited in claim 60.

The Examiner admitted that Armstrong et al. does not disclose or suggest this feature, but

alleged that Pant et al. discloses the feature and cited column 13, lines 9-31, of Pant et al. for

support. Office Action, page 15. Appellants submit that the disclosure of Pant et al. provides no

support for the Examiner's allegation for at least reasons similar to reasons given with regard to

claim 46.

For at least these reasons, it is respectfully submitted that claim 60 is patentable over

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, under 35

U.S.C. § 103. Reversal of the rejection of claim 60 is respectfully requested.

    9.   Claim 61.

Dependent claim 61 recites that the links in the identified document point to a plurality of

linked documents; and that the means for determining the scores includes means for determining,

for each of the linked documents, scores for one or more linking documents that contain links to

the linked document, means for determining a score for each of the linked documents based on

the scores of the one or more linking documents, and means for associating the determined

scores for the linked documents with the corresponding links in the identified document.

Initially, claim 61 depends from claim 59. Therefore, claim 61 is patentable over

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, for at

least the reasons given with regard to claim 59.

Further, Armstrong et al. and Pant et al. do not disclose or suggest the combination of

features recited in claim 61. For example, Armstrong et al. and Pant et al. do not disclose or

suggest means for determining a score for each of the linked documents based on the scores of

the one or more linking documents, as recited in claim 61.

The Examiner alleged that Armstrong et al. discloses this feature and cited section 2 and

Figure 4, of Armstrong et al. for support. Office Action, page 5. Appellants submit that the

disclosure of Armstrong et al. provides no support for the Examiner's allegation for at least

reasons similar to reasons given with regard to claim 41.

For at least these reasons, it is respectfully submitted that claim 61 is patentable over

Armstrong et al. and Pant et al., whether taken alone or in any reasonable combination, under 35

U.S.C. § 103. Reversal of the rejection of claim 61 is respectfully requested.

B.   The Rejection Under 35 U.S.C. § 103(a) Based on <u>Arthurs</u> (U.S. Patent No. 6,591,261) in View of <u>Pant et al.</u> (U.S. Patent No. 6,012,053) Should be Reversed.

1.   Claim 47.

Independent claim 47 is directed to a computer-implemented method that comprises

receiving a search query; providing a list of search results in response to the search query;

receiving selection of one of the search results in the list of search results; identifying links in a document corresponding to the selected search result; determining a score for one of the links based on a degree of match between the search query and a content of a linked document pointed to by the one of the links; modifying the document based on the determined score for the one of the links; and providing the modified document.

Arthurs and Pant et al., whether taken alone or in any reasonable combination, do not disclose or suggest the combination of features recited in claim 47. For example, Arthurs and Pant et al. do not disclose or suggest determining a score for one of the links in a document corresponding to a selected search result based on a degree of match between the search query and a content of a linked document pointed to by the one of the links, as recited in claim 47.

The Examiner alleged that Arthurs discloses these features and cited column 6, line 19 - column 7, line 3, of Arthurs for support. Office Action, page 18. Appellants submit that the disclosure of Arthurs provides no support for the Examiner's allegation.

At column 6, line 19 - column 7, line 3, Arthurs discloses that a search engine, in response to a received search query, accesses a content database to find web sites that match the search query and ranks the web sites using word or phrase relevance to form search results. Arthurs also discloses adjusting the weight or score for a web site, corresponding to a search result, based on relationship values in an association database for each determined relationship for that web site.

The Examiner appears to be alleging that the list of search results is a document corresponding to a selected search result. Appellants submit that this is an unreasonable interpretation of Arthurs. The list of search results is not a document corresponding to a selected

search result, as recited in claim 47.

When addressing this feature of claim 47, the Examiner did not point to the list of search results as a document corresponding to a selected search result, but instead pointed to a web site that is retrieved and displayed by selecting a link. Office Action, page 17. Nowhere does Arthurs disclose or remotely suggest determining a score for a link in this web site, let alone determining the score based on a degree of match between a search query and a content of a linked document pointed to by the link. Thus, Arthurs does not disclose or remotely suggest determining a score for one of the links in a document corresponding to a selected search result based on a degree of match between the search query and a content of a linked document pointed to by the one of the links, as recited in claim 47. Pant et al. also does not disclose or suggest these features of claim 47.

For at least these reasons, it is respectfully submitted that claim 47 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 47 is respectfully requested.

2.   Claim 48.

Dependent claim 48 recites that determining the score for the one of the links includes determining scores for each of a plurality of the links in the document based on a degree of match between the search query and a content of a linked document pointed to by the link; and modifying the document includes reordering the links based on the determined scores.

Initially, claim 48 depends from claim 47. Therefore, claim 48 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 47.

Further, Arthurs and Pant et al. do not disclose or suggest the combination of features recited in claim 48. For example, Arthurs and Pant et al. do not disclose or suggest reordering the links in a document, corresponding to a selected search result, based on the determined scores.

The Examiner alleged that Pant et al. discloses this feature and cited column 2, lines 25-43, and column 3, lines 56-63, of Pant et al. for support. Office Action, page 19. Appellants submit that the disclosure of Pant et al. provides no support for the Examiner's allegation.

At column 2, lines 25-43, Pant et al. discloses:

> Accordingly, one aspect of the present invention is a computer system for providing user-controllable relevance ranking of search results from a query on a collection of items of information. The computer system includes a relevance determination module having a first input for receiving a set of search results from a query indicating items in the collection matching the query, a second input for receiving an indication of relevance factors specified by a user, and a third input for receiving information about the items in the set of search results to which relevance factors may be applied. This module has an output for providing an indication of a score indicative of relevance for each of the items in the set of search results. A sorting module has an input which receives the score associated with each item and an indication of the set of search results, and an output providing to the user an indication of the items in the set of search results in an order ranked according to the relevance score of each item.

In this section, Pant et al. discloses a relevance determination module that provides a score that is indicative of relevance of each of the items in a set of search results, and a sorting module that ranks the items in the set of search results according to their relevance scores. Appellants submit that the set of search results is not a document corresponding to a selected search result. In fact, Pant et al. specifically discloses that the set of search results is not formed into a document until after the items in the set of search results are ranked by the sorting module. Column 6, lines 10-15. Thus, Pant et al. does not disclose or suggest reordering the links in a document, corresponding to a selected search result, based on the determined scores, as recited in claim 48.

At column 3, lines 56-63, <u>Pant et al.</u> discloses:

> Another embodiment is shown in FIG. 2. In this computer system 130, the search results
> 110 do not include a score with each item. Therefore, the relevance determination module
> 128 outputs scores 124 separately for each item in the search results. Both the search
> results 110 and the list of scores 124 are used by the sorting module 124 to produce
> ranked results for the user. The embodiment is otherwise the same as shown in FIG. 1.

In this section, <u>Pant et al.</u> discloses a relevance determination module that provides a score for each of the items in a set of search results, and a sorting module that ranks the items in the set of search results according to their scores. Appellants submit that the set of search results is not a document corresponding to a selected search result. In fact, <u>Pant et al.</u> specifically discloses that the set of search results is not formed into a document until after the items in the set of search results are ranked by the sorting module. Column 6, lines 10-15. Thus, <u>Pant et al.</u> does not disclose or suggest reordering the links in a document, <u>corresponding to a selected search result</u>, based on the determined scores, as recited in claim 48.

For at least these reasons, it is respectfully submitted that claim 48 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 48 is respectfully requested.

       3.   Claim 49.

Dependent claim 49 recites that reordering the links includes sorting the links based on the determined scores.

Initially, claim 49 depends from claim 48. Therefore, claim 49 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 48.

Further, <u>Arthurs</u> and <u>Pant et al.</u> do not disclose or suggest the combination of features recited in claim 48.

The Examiner admitted that <u>Arthurs</u> does not disclose this feature, but alleged that <u>Pant et al.</u> discloses this feature and cited column 2, lines 25-43, and column 3, lines 56-63, of <u>Pant et al.</u> for support. Office Action, page 20. Appellants submit that the disclosure of <u>Pant et al.</u> provides no support for the Examiner's allegation.

At column 2, lines 25-43, <u>Pant et al.</u> discloses a relevance determination module that provides a score that is indicative of relevance of each of the items in a set of search results, and a sorting module that ranks the items in the set of search results according to their relevance scores. Appellants submit that the set of search results is not a document corresponding to a selected search result. In fact, <u>Pant et al.</u> specifically discloses that the set of search results is not formed into a document until after the items in the set of search results are ranked by the sorting module. Column 6, lines 10-15. Thus, <u>Pant et al.</u> does not disclose or suggest sorting the links in a document, <u>corresponding to a selected search result</u>, based on the determined scores, as recited in claim 49.

At column 3, lines 56-63, <u>Pant et al.</u> discloses a relevance determination module that provides a score for each of the items in a set of search results, and a sorting module that ranks the items in the set of search results according to their scores. Appellants submit that the set of search results is not a document corresponding to a selected search result. In fact, <u>Pant et al.</u> specifically discloses that the set of search results is not formed into a document until after the items in the set of search results are ranked by the sorting module. Column 6, lines 10-15. Thus,

Pant et al. does not disclose or suggest sorting the links in a document, corresponding to a selected search result, based on the determined scores, as recited in claim 49.

For at least these reasons, it is respectfully submitted that claim 49 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 49 is respectfully requested.

4. Claim 50.

Dependent claim 50 recites that that modifying the document includes changing at least one visual characteristic of the one of the links within the document based on the determined score.

Initially, claim 50 depends from claim 47. Therefore, claim 50 is patentable over Arthurs and Pant et al., whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 47.

Further, Arthurs and Pant et al. do not disclose or suggest the combination of features recited in claim 50.

The Examiner admitted that Arthurs does not disclose this feature, but alleged that Pant et al. discloses this feature and cited column 6, line 50 – column 7, line 50, of Pant et al. for support. Office Action, pages 20-21. Appellants submit that the disclosure of Pant et al. provides no support for the Examiner's allegation.

At column 6, line 50 – column 7, line 50, Pant et al. discloses various relevance factors that can be used to score a document corresponding to an item in a set of search results, including the position of search terms in the document, the frequency of occurrence of a search term in the document, the frequency of occurrence of a search term in all documents, the number

of search terms found in the document, the ordering of search terms in the document, the

pairwise distance between search terms in the document, and the length of search words.

Nowhere in this section, or elsewhere, does <u>Pant et al.</u> disclose or suggest changing at least one

visual characteristic of one of the links within a document, <u>corresponding to a selected search</u>

<u>result</u>, based on the determined score, as recited in claim 50.

Instead, at best, <u>Pant et al.</u> discloses annotating a search result link corresponding to an

item in a set of search results. Fig. 7; column 13, lines 9-17. As explained above, <u>Pant et al.</u>

specifically discloses that the set of search results is not formed into a document until after the

items in the set of search results are ranked by the sorting module. Column 6, lines 10-15. Thus,

<u>Pant et al.</u> does not disclose or suggest changing at least one visual characteristic of one of the

links within a document, <u>corresponding to a selected search result</u>, based on the determined

score, as recited in claim 50.

For at least these reasons, it is respectfully submitted that claim 50 is patentable over

<u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. §

103. Reversal of the rejection of claim 50 is respectfully requested.

5.   Claim 51.

Dependent claim 51 recites comparing the determined score to a threshold; and deleting

the one of the links when the determined score for the one of the links falls below a threshold.

Initially, claim 51 depends from claim 47. Therefore, claim 51 is patentable over <u>Arthurs</u>

and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, for at least the reasons

given with regard to claim 47.

Further, Arthurs and Pant et al. do not disclose or suggest the combination of features recited in claim 51. For example, Arthurs and Pant et al. do not disclose or suggest deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51.

The Examiner alleged that Arthurs discloses this feature and cited column 2, lines 14-23, column 6, lines 5-16, and column 10, lines 34-36, of Arthurs for support. Office Action, page 21. Appellants submit that the disclosure of Arthurs provides no support for the Examiner's allegation.

At column 2, lines 14-23, Arthurs discloses grouping web sites by setting threshold values for sites that are linked by common web sites. Other than mentioning the word "threshold," this section of Arthurs has absolutely nothing to do with deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51.

At column 6, lines 5-16, Arthurs discloses using a threshold to determine whether to preserve associations in the association database. Other than mentioning the word "threshold," this section of Arthurs has absolutely nothing to do with deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51. Preserving associations with an association or relationship value exceeding a threshold is not remotely similar to deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51.

At column 10, lines 34-36, <u>Arthurs</u> discloses that the association database may use a threshold to remove data from the database. Other than mentioning the word "threshold," this section of <u>Arthurs</u> has absolutely nothing to do with deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51. Using a threshold to determine whether to remove data from a database is not remotely similar to deleting one of the links from a document, corresponding to a selected search result, when the determined score for the one of the links falls below a threshold, as recited in claim 51.

The Examiner also alleged that, at the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the disclosure of <u>Arthurs</u> to delete one of the links from the identified document when the determine score for the one of the links falls below the threshold. Office Action, page 21. Appellants submit that there is no merit to the Examiner's allegation. The Examiner's allegation is merely conclusory and provides no explanation as to why it would have been obvious to modify the disclosure of <u>Arthurs</u> in the manner suggested by the Examiner.

For at least these reasons, it is respectfully submitted that claim 51 is patentable over <u>Arthurs</u> and <u>Pant et al.</u>, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 51 is respectfully requested.

C.   **The Rejection Under 35 U.S.C. § 103(a) Based on <u>Armstrong et al.</u> ("WebWatcher: A Learning Apprentice for the World Wide Web," 1995) in View of <u>Pant et al.</u> (U.S. Patent No. 6,012,053) and <u>Page</u> (U.S. Patent No. 6,285,999) Should be Reversed.**

      1.   Claim 42.

Dependent claim 42 recites that the links in the identified document point to a plurality of linked documents; and that determining the scores includes determining a clickthrough rate for each of the linked documents, determining a score for each of the linked documents based on the determined clickthrough rates, and associating the determined scores for the linked documents with the corresponding links in the identified document.

Initially, claim 42 depends from claim 39. The disclosure of <u>Page</u> does not cure the deficiencies in the disclosures of <u>Armstrong et al.</u> and <u>Pant et al.</u> identified above with regard to claim 39. Claim 42 is, therefore, patentable over <u>Armstrong et al.</u>, <u>Pant et al.</u>, and <u>Page</u>, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 39.

Additionally, <u>Armstrong et al.</u>, <u>Pant et al.</u>, and <u>Page</u>, whether taken alone or in any reasonable combination, do not disclose the combination of features recited in claim 42. For example, <u>Armstrong et al.</u>, <u>Pant et al.</u>, and <u>Page</u> do not disclose or suggest determining a score for each of the linked documents based on a clickthrough rate for each of the linked documents, as recited in claim 42.

The Examiner admitted that <u>Armstrong et al.</u> and <u>Pant et al.</u> do not disclose or suggest this feature, but alleged that <u>Page</u> discloses determining the popularity of a document. Office Action, page 23. The Examiner alleged that determining a clickthrough rate is equivalent to determining the popularity or how many hits the documents has had by other links linking to the

document and determining how important that document is. Office Action, page 23. Appellants

submit that this is an unreasonable allegation based solely on a flawed attempt to reconstruct the

claimed invention using impermissible hindsight.

Appellants' specification specifically describes a clickthrough rate of a document as the

number of times that users clicked on the document over a period of time. Appellants'

specification at page 14, lines 3-7. Appellants submit that it is unreasonable to equate the

number of times that users clicked on a document over a period of time to the number of links

linking to the document. Thus, the Examiner's allegation is flawed, as is the Examiner's

rejection.

For at least these reasons, it is respectfully submitted that claim 42 is patentable over

Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination,

under 35 U.S.C. § 103. Reversal of the rejection of claim 42 is respectfully requested.

       2.   Claim 43.

Dependent claim 43 recites that the links in the identified document point to a plurality of

linked documents; and that determining the scores includes determining a measure of popularity

associated with each of the linked documents, determining a score for each of the linked

documents based on the determined measure of popularity, and associating the determined scores

for the linked documents with the corresponding links in the identified document.

Claim 43 depends from claim 39. The disclosure of Page does not cure the deficiencies

in the disclosures of Armstrong et al. and Pant et al. identified above with regard to claim 39.

Claim 43 is, therefore, patentable over Armstrong et al., Pant et al., and Page, whether taken

alone or in any reasonable combination, for at least the reasons given with regard to claim 39.

For at least these reasons, it is respectfully submitted that claim 43 is patentable over Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination, under 35 U.S.C. § 103. Reversal of the rejection of claim 43 is respectfully requested.

      3.   Claim 54.

Dependent claim 54 recites that the links in the identified document point to a plurality of linked documents; and that determining the scores includes determining a clickthrough rate for each of the linked documents, determining a score for each of the linked documents based on the determined clickthrough rates, and associating the determined scores for the linked documents with the corresponding links in the identified document.

Initially, claim 54 depends from claim 52. The disclosure of Page does not cure the deficiencies in the disclosures of Armstrong et al. and Pant et al. identified above with regard to claim 52. Claim 54 is, therefore, patentable over Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 52.

Additionally, Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination, do not disclose or suggest the combination of features recited in claim 54. For example, Armstrong et al., Pant et al., and Page do not disclose or suggest determining a score for each of the linked documents based on a clickthrough rate for each of the linked documents, as recited in claim 54.

The Examiner admitted that Armstrong et al. and Pant et al. do not disclose or suggest this feature, but alleged that Page discloses determining the popularity of a document. Office Action, page 23. The Examiner alleged that determining a clickthrough rate is equivalent to

determining the popularity or how many hits the documents has had by other links linking to the

document and determining how important that document is. Office Action, page 23. Appellants

submit that this is an unreasonable allegation based solely on a flawed attempt to reconstruct the

claimed invention using impermissible hindsight for at least reasons similar to reasons given

with regard to claim 42.

For at least these reasons, it is respectfully submitted that claim 54 is patentable over

Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination,

under 35 U.S.C. § 103. Reversal of the rejection of claim 54 is respectfully requested.

4.   Claim 55.

Dependent claim 55 recites that the links in the identified document point to a plurality of

linked documents; and that determining the scores includes determining a measure of popularity

associated with each of the linked documents, determining a score for each of the linked

documents based on the determined measure of popularity, and associating the determined scores

for the linked documents with the corresponding links in the identified document.

Claim 55 depends from claim 52. The disclosure of Page does not cure the deficiencies

in the disclosures of Armstrong et al. and Pant et al. identified above with regard to claim 52.

Claim 55 is, therefore, patentable over Armstrong et al., Pant et al., and Page, whether taken

alone or in any reasonable combination, for at least the reasons given with regard to claim 52.

For at least these reasons, it is respectfully submitted that claim 55 is patentable over

Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination,

under 35 U.S.C. § 103. Reversal of the rejection of claim 55 is respectfully requested.

5.   Claim 62.

Dependent claim 62 recites that the links in the identified document point to a plurality of linked documents; and that the means for determining the scores includes means for determining a clickthrough rate for each of the linked documents, means for determining a score for each of the linked documents based on the determined clickthrough rates, and means for associating the determined scores for the linked documents with the corresponding links in the identified document.

Initially, claim 62 depends from claim 59. The disclosure of Page does not cure the deficiencies in the disclosures of Armstrong et al. and Pant et al. identified above with regard to claim 59. Claim 62 is, therefore, patentable over Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination, for at least the reasons given with regard to claim 59.

Additionally, Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination, do not disclose or suggest the combination of features recited in claim 62. For example, Armstrong et al., Pant et al., and Page do not disclose or suggest means for determining a score for each of the linked documents based on a clickthrough rate for each of the linked documents, as recited in claim 62.

The Examiner admitted that Armstrong et al. and Pant et al. do not disclose or suggest this feature, but alleged that Page discloses determining the popularity of a document. Office Action, page 23. The Examiner alleged that determining a clickthrough rate is equivalent to determining the popularity or how many hits the documents has had by other links linking to the document and determining how important that document is. Office Action, page 23. Appellants submit that this is an unreasonable allegation based solely on a flawed attempt to reconstruct the

claimed invention using impermissible hindsight for at least reasons similar to reasons given
with regard to claim 42.

For at least these reasons, it is respectfully submitted that claim 62 is patentable over
Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination,
under 35 U.S.C. § 103. Reversal of the rejection of claim 62 is respectfully requested.

6.   Claim 63.

Dependent claim 63 recites that the links in the identified document point to a plurality of
linked documents; and that the means for determining the scores includes means for determining
a measure of popularity associated with each of the linked documents, means for determining a
score for each of the linked documents based on the determined measure of popularity, and
means for associating the determined scores for the linked documents with the corresponding
links in the identified document.

Claim 63 depends from claim 59. The disclosure of Page does not cure the deficiencies
in the disclosures of Armstrong et al. and Pant et al. identified above with regard to claim 59.
Claim 63 is, therefore, patentable over Armstrong et al., Pant et al., and Page, whether taken
alone or in any reasonable combination, for at least the reasons given with regard to claim 59.

For at least these reasons, it is respectfully submitted that claim 63 is patentable over
Armstrong et al., Pant et al., and Page, whether taken alone or in any reasonable combination,
under 35 U.S.C. § 103. Reversal of the rejection of claim 63 is respectfully requested.

VIII.   <u>CONCLUSION</u>

In view of the foregoing arguments, Appellants respectfully solicit the Honorable Board
to reverse the Examiner's rejections of claims 39 and 41-66 under 35 U.S.C. § 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is
hereby made. Please charge any shortage in fees due in connection with the filing of this paper,
including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess
fees to such deposit account.

Respectfully submitted,

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CLAIM APPENDIX

1-38. (canceled)

39.   A computer-implemented method, comprising:

identifying a document that is stored on a server in a network and that includes links to

linked documents;

determining scores for a plurality of the links in the identified document;

modifying the identified document based on the determined scores, where the modifying

includes:

reordering at least two of the links based on the determined scores, or

sorting at least two of the links based on the determined scores; and

providing the modified document to a user.

40.   (canceled)

41.   The method of claim 39, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

for each of the linked documents, determining scores for one or more linking documents

that contain links to the linked document,

determining a score for each of the linked documents based on the scores of the one or

more linking documents, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

42.   The method of claim 39, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

determining a clickthrough rate for each of the linked documents,

determining a score for each of the linked documents based on the determined

clickthrough rates, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

43.   The method of claim 39, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

determining a measure of popularity associated with each of the linked documents,

determining a score for each of the linked documents based on the determined measure of

popularity, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

44.   The method of claim 39, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

receiving input from the user,

determining a score for each of the linked documents based on the received input, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

45.   The method of claim 44, wherein determining the score for each of the linked

documents includes:

for each of the linked documents, comparing one or more words of the received input

with a content of the linked document, and

determining a score for the linked document based on a degree of match between the one

or more words and the content of the linked document.

46.   The method of claim 39, wherein modifying the identified document includes:

comparing the determined scores to a threshold, and

deleting one of the links from the identified document when the determined score for the

one of the links falls below the threshold.

47.   A computer-implemented method, comprising:

receiving a search query;

providing a list of search results in response to the search query;

receiving selection of one of the search results in the list of search results;

identifying links in a document corresponding to the selected search result;

determining a score for one of the links based on a degree of match between the search query and a content of a linked document pointed to by the one of the links;

modifying the document based on the determined score for the one of the links; and

providing the modified document.

48.   The method of claim 47, wherein determining the score for the one of the links includes determining scores for each of a plurality of the links in the document based on a degree of match between the search query and a content of a linked document pointed to by the link; and

wherein modifying the document includes:

reordering the links based on the determined scores.

49.   The method of claim 48, wherein reordering the links includes:

sorting the links based on the determined scores.

50.   The method of claim 47, wherein modifying the document includes:

changing at least one visual characteristic of the one of the links within the document based on the determined score.

51.   The method of claim 47, further comprising:

comparing the determined score to a threshold; and

deleting the one of the links when the determined score for the one of the links falls

below a threshold.

52.   A computer-implemented method, comprising:

identifying a document that is stored on a server in a network and that includes links to

linked documents;

determining scores for a plurality of the links in the identified document;

comparing the determined scores to a threshold;

deleting one of the plurality of links from the identified document when the score for the

one of the links falls below the threshold; and

providing, to a user, the identified document without the deleted link.

53.   The method of claim 52, wherein the links in the identified document point to a

plurality of linked documents; and

wherein determining the scores includes:

for each of the linked documents, determining scores for one or more linking documents

that contain links to the linked document,

determining a score for each of the linked documents based on the scores of the one or

more linking documents, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

54.   The method of claim 52, wherein the links in the identified document point to a plurality of linked documents; and

wherein determining the scores includes:

determining a clickthrough rate for each of the linked documents,

determining a score for each of the linked documents based on the determined clickthrough rates, and

associating the determined scores for the linked documents with the corresponding links in the identified document.

55.   The method of claim 52, wherein the links in the identified document point to a plurality of linked documents; and

wherein determining the scores includes:

determining a measure of popularity associated with each of the linked documents,

determining a score for each of the linked documents based on the determined measure of popularity, and

associating the determined scores for the linked documents with the corresponding links in the identified document.

56.   The method of claim 52, wherein the links in the identified document point to a plurality of linked documents; and

wherein determining the scores includes:

receiving input from the user,

determining a score for each of the linked documents based on the received input, and

associating the determined scores for the linked documents with the corresponding links

in the identified document.

57.   The method of claim 56, wherein determining the score for each of the linked

documents includes:

for each of the linked documents, comparing one or more words of the received input

with a content of the linked document, and

determining a score for the linked document based on a degree of match between the one

or more words and the content of the linked document.

58.   The method of claim 52, further comprising:

determining additional information regarding a linked document pointed to by the one of

the plurality of links when the score for the one of the links does not fall below the threshold;

and

providing the identified document with the additional information to the user.

59.   A system, comprising:

means for identifying a document based on an address associated with the document, the

document including links that point to linked documents;

means for determining scores for a plurality of the links in the identified document;

means for comparing the determined scores to a threshold;

means for determining that a score for one of the plurality of links is greater than the threshold;

means for determining additional information regarding the linked document pointed to by the one of the plurality of links; and

means for providing the identified document with the additional information to a user.

60.   The system of claim 59, further comprising:

means for determining that a score for another one of the plurality of links is not greater than the threshold;

means for deleting the other one of the plurality of links from the identified document; and

means for providing, to a user, the identified document without the deleted link.

61.   The system of claim 59, wherein the links in the identified document point to a plurality of linked documents; and

wherein the means for determining the scores includes:

means for determining, for each of the linked documents, scores for one or more linking documents that contain links to the linked document,

means for determining a score for each of the linked documents based on the scores of the one or more linking documents, and

means for associating the determined scores for the linked documents with the

corresponding links in the identified document.

62.   The system of claim 59, wherein the links in the identified document point to a

plurality of linked documents; and

wherein the means for determining the scores includes:

means for determining a clickthrough rate for each of the linked documents,

means for determining a score for each of the linked documents based on the determined

clickthrough rates, and

means for associating the determined scores for the linked documents with the

corresponding links in the identified document.

63.   The system of claim 59, wherein the links in the identified document point to a

plurality of linked documents; and

wherein the means for determining the scores includes:

means for determining a measure of popularity associated with each of the linked

documents,

means for determining a score for each of the linked documents based on the determined

measure of popularity, and

means for associating the determined scores for the linked documents with the

corresponding links in the identified document.

64.   The system of claim 59, wherein the links in the identified document point to a

plurality of linked documents; and

wherein the means for determining the scores includes:

means for receiving input from the user,

means for determining a score for each of the linked documents based on the received

input, and

means for associating the determined scores for the linked documents with the

corresponding links in the identified document.

65.   The system of claim 64, wherein the means for determining the score for each of

the linked documents includes:

means for comparing, for each of the linked documents, one or more words of the

received input with a content of the linked document, and

means for determining a score for the linked document based on a degree of match

between the one or more words and the content of the linked document.

66.   The system of claim 59, wherein the additional information includes an excerpt

from the linked document, a size of the linked document, or a date of last modification of the

linked document.

IX.   EVIDENCE APPENDIX

None

X.   RELATED PROCEEDINGS APPENDIX

None